

CLAIMS

1. (Currently Amended) A method of activating an cross-linked organic coating which is a polyurethane, epoxy, polyester, ~~polycarbonate~~ and/or acrylic coating on a substrate to enhance adhesion of the coating to a further organic coating and/or to other entities selected from adhesives, sealants, pressure sensitive decals and logos comprising applying an activation treatment to the surface of the organic coating wherein the activation treatment consists of an organic solvent selected from ester based solvents, ketones, alcohols, ethers, amides, aromatics and halogenated solvents; an adhesion promoter selected from linear and branched polyethylene imines (PEI);, amine and/or hydroxyl terminated polyether glycols; dendrimers; low molecular weight amines; glycidylethers; and aziridines ~~or~~ and combinations thereof; and optionally an additive, wherein contact of the organic coating with the solvent or the solvent and adhesion promoter combination results in swelling of the organic coating.
2. (Original) A method according to claim 1, in which the adhesion promoter is a compound having at least one functional group.
3. (Withdrawn) A method according to claim 2, in which the adhesion promoter is a compound having two or more functional groups which are of the same or different functionality.
4. (Previously Presented) A method according to claim 2, in which the functional group is nucleophilic.
5. (Previously presented) A method according to claim 4, in which the functional group is selected from amine, alcohol, carboxylic acid, amide, ester, thiol, ether, and anhydride groups.
6. (Original) A method according to claim 5, in which the functional group is an amine and/or alcohol group.
7. (Canceled)

8. (Previously presented/Withdrawn) A method according to claim 1, in which the amine and/or hydroxyl terminated polyether glycols are selected from polyethylene glycol, polypropylene glycol and polyethylene oxide.

9. (Withdrawn) A method according to claim 1, in which the dendrimers are selected from polypropylene imine octamine dendrimer and polypropylene imine tetraamine dendrimer.

10. (Previously presented) A method according to claim 1, in which the low molecular weight amines are selected from ethylene diamine, diethylene tetraamine, triethylene tetraamine (TETA), tetraethylene pentamine, pentaethylene hexamine, piperazine, aminoethylpiperazine, 1,4-bis(3-aminopropyl)piperazine, N,N'-bis(3-aminopropyl)ethylenediamine, 4,9-dioxa-1,12-dodecanediamine, 2,2'-(ethyleneoxy)bis(ethylamine), 4,7,10-trioxatridecane-1,13-diamine (TODA), 4,7-dioxadecane-1,10-diamine (DODA), polyetheramine T 403, N,N-bis (3-aminopropyl)-ethylene diamine, 3-2(2-aminoethyl)aminopropyl amine, dipropyltriamine and 4,4'-diamino-dicyclohexylamine.

11. (Original) A method according to claim 10, in which the low molecular weight amines are selected from TODA and DODA.

12. (Canceled)

13. (Withdrawn) A method according to claim 1, in which the glycidylethers are selected from trimethanolpropane triglycidylether and polyethylene glycol diglycidyl ethers.

14. (Withdrawn) A method according to claim 1, in which the aziridine is trimethylolpropanetris (3-aziridino propionate).

15. (Canceled)

16. (Withdrawn) A method according to claim 1, in which the adhesion promoter has a molecular weight less than about 100,000.
17. (Withdrawn) A method according to claim 16, in which the adhesion promoter has a molecular weight less than about 10,000.
18. (Withdrawn) A method according to claim 1, in which two or more adhesion promoters are present.
19. (Withdrawn) A method according to claim 18, in which high and low molecular weight adhesion promoters are present.
20. (Withdrawn) A method according to claim 19, in which the high and low molecular weight adhesion promoters are high and low molecular weight polyether glycols.
21. (Withdrawn) A method according to claim 20, in which the high and low molecular weight polyether glycols are 4,9-dioxa-1, 12-dodecane diamine and polypropylene glycol, respectively.
22. (Withdrawn) A method according to claim 18, in which the adhesion promoter is a combination of aziridines and trimethylolpropanetrakis (3-aziridino propionate); aziridine and acids; or aziridine and glycols.
23. (Previously presented) A method according to claim 1, in which the adhesion promoter is present in an amount more than about 0.01% based on the total weight of the combination of solvent and adhesion promoter.
24. (Original) A method according to claim 1, in which the adhesion promoter is present in an amount of about 1% to about 50% based on the total weight of the combination of solvent and adhesion promoter.

25. (Canceled)

26. (Canceled)

27. (Previously presented) A method according to claim 1, in which the solvent is selected from ethyl acetate, isopropyl acetate, tertiary butyl acetate, glycolether acetates based on ethyleneglycol and propylene glycol repeat units, methyl amyl ketone, methyl isoamyl ketone, benzyl alcohol, isopropylalcohol, glycoldiethers, N-methyl pyrrolidinone, dichloromethane and dichloroethylene.

28. (Withdrawn) A method according to claim 1, in which the solvent is a combination of N-methyl pyrrolidinone and ethyl acetate; dichloromethane and benzyl alcohol; ethyl acetate and benzyl alcohol; ethyl acetate and diglycol ether dimethyl ether; or isopropylalcohol and ethoxyethylacetate.

29. (Original) A method according to claim 1, in which the solvent is present in an amount less than about 99.9% based on the total weight of the combination of solvent and adhesion promoter.

30. (Original) A method according to claim 29, in which the solvent is present in an amount of about 50 to about 99.9% based on the total weight of the combination of solvent and adhesion promoter.

31. (Deleted)

32. (Previously presented) A method according to claim 1, in which the additive is selected from rheology modifiers, film formers, wetting agents, surfactants, dispersants, substrate cling agents, anti-foaming agents, anti-corrosion reagents, stabilizers, leveling agents, pigments and dyes.

33. (Previously presented) A method according to claim 1, in which the additive is present in an amount of less than about 10% based on the total weight of the combination of solvent, adhesion

promoter and additive.

34. (Previously presented) A method according to claim 1, in which the solvent and adhesion promoter are applied either simultaneously, sequentially or separately.

35. (Previously presented) A method according to claim 1, in which the solvent and adhesion promoter are applied simultaneously in the form of an activation treatment.

36. (Previously presented) A method according to claim 1, in which the solvent and adhesion promoter are applied via a spray, brush, dip, knife, blade, hose, roller, wipe, curtain, flood, flow, mist, pipette or combinations thereof.

37. (Canceled)

38. (Canceled)

39. (Original) A method according to claim 1, in which excess solvent and/or adhesion promoter is removed by solvent or water rinsing; dry, water or solvent wiping; air or gas knife; vacuum application; squeegee; and/or natural or forced convection evaporation.

40. (Currently Amended) A coated substrate having an cross-linked activated organic coating, which is a polyurethane, epoxy, polyester, ~~polycarbonate~~ and/or acrylic coating wherein the adhesion of the activated coating to a further organic coating and/or other entities selected from adhesives, sealants, pressure sensitive decals and logos has been enhanced by application of an activation treatment consisting of an organic solvent selected from ester based solvents, ketones, alcohols, ethers, amides, aromatics and halogenated solvents; an adhesion promoter selected from linear and branched polyethylene imines (PEI)₂, amine and/or hydroxyl terminated polyether glycols₂, dendrimers₂, low molecular weight amines₂, glycidylethers₂, ~~and~~ aziridines ~~or~~ and combinations thereof; and optionally an additive to the surface of the activated coating such that contact of the organic coating with the solvent or the solvent and adhesion promoter

combination results in swelling of the organic coating.

41. (Previously presented) A coated substrate according to claim 40, in which the substrate is a metal, composite or a material containing wood or fabric.

42. (Currently Amended) An activation treatment for an cross-linked organic coating which is a polyurethane, epoxy, polyester, ~~polycarbonate~~ and/or acrylic coating on a substrate to enhance adhesion of the coating to a further coating and/or other entities selected from adhesives, sealants, pressure sensitive decals and logos consisting of an adhesion promoter selected from linear and branched polyethylene imines (PEI);, amine and/or hydroxyl terminated polyether glycols; dendrimers; low molecular weight amines; glycidylethers; ~~and aziridines or~~ and combinations thereof; a solvent selected from ester based solvents, ketones, alcohols, ethers, amides, aromatics and halogenated solvents; and optionally an additive, wherein contact of the organic coating with the solvent or the solvent and adhesion promoter combination results in swelling of the organic coating.

43. (Original) A method for the preparation of the activation treatment according to claim 42, comprising the step of mixing the solvent with the adhesion promoter.

44. (Previously presented) A method according to claim 1, in which the solvent, adhesion promoter and additive are applied either simultaneously, sequentially or separately.

45. (Previously presented) A method according to claim 1, in which the solvent, adhesion promoter and additive are applied simultaneously in the form of an activation treatment.